

ASSOCIATION BETWEEN SOCIO-DEMOGRAPHIC PROFILE AND EXTENT OF USE OF ICT AMONG FARMERS

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ABSTRACT

The study was undertaken to find the association between socio-demographic profile and communication characteristics of farmers with their extent of use of ICTs (Information and Communication Technologies) in Udhamb Singh Nagar district of Uttarakhand. Analytical research design was used for the study. Pre-tested interview schedule was used for collection of data from 120 respondents. Statistical techniques such as frequency, percentage, Karl Pearson's coefficient of correlation and t-test were used to analyze the data for meaningful interpretation. The findings of the study revealed that majority of the respondents (69.17%) belonged to middle age group, were male (79.17%), belonged to nuclear family (60.83%) and were mostly married. More than one third (40%) farmers belonged to scheduled caste/tribe. Regarding association between selected characteristics of the respondents and extent of use of ICT, it was found that education, total family income, mass media exposure, cosmopolitanism, information seeking behavior, extension contact had positive and significant relationship with the extent of use of ICTs. On the other hand age, landholding and social participation had non-significant relationship with the extent of use of ICTs.

KEYWORDS: Demography, E-Choupal, Icts, Profile

Original Article

Received: Oct 01, 2016; **Accepted:** Oct 20, 2016; **Published:** Oct 24, 2016; **Paper Id.:** IJASRDEC201623

INTRODUCTION

Agriculture sector have capability in poverty reduction and ensuring food security and is responsible for the provision of sustainable livelihoods to farming community [Arfan *et al.*, 2015]. Information plays an important role in strengthening farmer's daily decision-making related to farmer enterprise by enhancing their knowledge about new technology and market information. In every stage of the agriculture production and different situation, farmer takes a number of specific decisions [Mittal, Gandhi, and Tripathi 2010]. Use of Information and Communication Technologies (ICTs) is a pioneering way for development of agriculture sector which is the most vital part of the economy. With the advancement in communication technologies and its mechanism, extension and rural advisory services are going to be more reliant on ICTs so as to flourish in more efficient, appropriate and innovative ways for delivery of agro-based advanced technologies to the end-users.

ICT based extension and advisory services plays a vital role in provision of agricultural information and knowledge for farmers. Keeping in view the significance of ICTs in overall agricultural advancement, it is necessary to promote ICT based agricultural information dissemination to enhance agricultural productivity on one hand and also to provide sustainable agricultural information delivery mechanism [Atibioke *et al.*, 2012]. Adopting ICTs as source of agricultural information is a very complex and critical procedure. It involves various

steps and factors at farmer's level. Out of these factors, socio-economic profile of farmers played a prominent position in adoption process. Various studies have been conducted to investigate socio-economic factors influencing behaviour of farming community with regard to ICT based agricultural extension services, approaches and other social activities. Diversified demographic attributes have been supposed to be manipulated by intellectual and social and economic variation associated with behaviour [Azilah *et al.*, 2015]. These factors may also be proficient for different policies to promote acceptance of ICT oriented agronomic practices among farmers for support in improving farm productivity and sustainability in agriculture [Burton, 2014]. In this regard, the study was conducted to explore the association between socio-demographic profile and communication characteristics of the farmers with the extent of use of ICT.

METHODOLOGY

The present study was conducted in Udhamsingh nagar district of Uttarakhand, which is having one of the best network connectivity in the state. National Informatics Centre (NIC) is playing a key role in extending e-governance to the farmers in the district because of which more numbers of farmers have been exposed to the ICT services. Gobind Ballabh Pantnagar University of Agriculture and Technology (GBPUAT) is having Agricultural Technology Information Centre (ATIC) and e-choupal is also functional in some parts of the district. Marketing facilities are also good in the district. The two blocks were selected by simple random sampling without replacement method. The total numbers of respondents were chosen for study was 120. Also, keeping in mind the number of households in the village, 10 per cent households were selected for the study and a member from each of these 10 per cent households was selected. Analytical research design was used for the present study. Pre-tested interview schedule was used for collection of data from 120 respondents. One member was selected from ten per cent households from each village and statistical techniques such as frequency, percentage, Karl Pearson's coefficient of correlation and t-test were used to analyze the data for meaningful interpretation.

RESULTS AND DISCUSSIONS

Socio- Economic Profile of the Farmers

The findings of the study revealed that majority of the respondents (69.17%) belonged to middle age group, with more respondents having agriculture and other occupation (55.84 %) as compared to the respondents who were completely dependent on agriculture (44.16 %) alone. Majority of the respondents (60.83 %) were from nuclear family and remaining 39.17 per cent belonged to joint family. About two third of respondents (64.17 %) had medium family income and a large proportion of the respondents (44.16 %) were small farmers followed by marginal famers (37.5 %). The findings of the study are in conformity with Verma *et. al.*, (2016) who also reported that majority of respondents belonged to middle age group, small farmers and medium family income.

Table 1: Socio- Economic Profile of the Farmers

Sl. No.	Particulars of Variables	Respondents	
		Frequency	%
1.	Age(Year)	21	17.50
(a)	Young (up to 34 years)	83	69.17
(b)	Middle (35-52 years)	16	13.33
(c)	Old (More than 53 years)		
2.	Gender	95	79.17
(a)	Male	25	20.83
(b)	Female		
3.	Marital Status	10	8.33
(a)	Married	89	74.17

(b)	Unmarried	21	17.50
(c)	Others		
4.	Caste	45	37.50
(a)	General	27	22.50
(b)	OBC	48	40.00
(c)	SC/ST		
5.	Occupation	63	44.16
(a)	Agriculture only	67	55.84
(b)	Agriculture with other subsidiary occupation		
6.	Type of family	47	39.17
(a)	Joint	73	60.83
(b)	Nuclear		
7.	Total family income	23	19.17
(a)	Low (up to 35,333)	77	64.17
(b)	Medium (35,334-79,445)	20	16.16
(c)	High (more than 79,445)		
8.	Size of Land holding	45	37.50
(a)	Marginal Farmers (Up to 2.5 acres)	53	44.16
(b)	Small Farmers (2.51-5 acres)	22	18.34
(c)	Large Farmers (More than 5 acres)		

It showed [Table 2] that vast majority i.e. 90.00 per cent and 95.00 per cent of respondents possessed television and mobile respectively whereas 55.83 and 57.50 per cent of respondents possessed radio and newspaper respectively.

Only 15.83 and 0.33 per cent of respondents possessed computer with internet and landline, respectively. About two-third of the respondents (70.83 %) had medium level of mass media exposure, and majority of respondents (49.17 %) had medium level of extension contact followed by 43.33 per cent of farmers having low extension contact and 7.5 per cent had high level of extension contact. The findings of the present study are in contrary with Bhanotra *et al.* (2016) who in their study reported that majority (55.00%) of the farmers were having low mass media exposure and low extension contact (60.83%). The findings of the study are in line with Vishwatej *et al.* (2016) who reported that majority of the respondents have medium extension contact (40.71%) and medium mass media participation (39.29%) but contrary to cosmopoliteness.

Majority of respondents (60.00%) had medium information seeking behavior, followed by 25.00 per cent who had low level and only 15.00 per cent had high level of information seeking behaviour. The findings of the study are in conformity with Verma *et. al.* (2016).

Table 2: Communication Characteristics of the Farmers

Sl. No.	Particulars of Variables	Respondents	
		Frequency	%
1.	Media ownership		
(a)	Television	108	90.00
(b)	Radio	67	55.83
(c)	Mobile	114	95.00
(d)	Computer with internet	19	15.83
(e)	Landlines	4	0.33
(f)	Newspaper	69	57.50
2.	Mass media exposure		
(a)	Low exposure (up to 5)	24	20.00
(b)	Medium exposure (6 to 10)	85	70.83
(c)	High exposure (more than 10)	11	9.17
3.	Extension contact		
(a)	Low contact (up to 2)	52	43.33

(b)	Medium contact (3-4)	59	49.17
(c)	High contact (more than 4)	9	7.50
4. Information seeking behaviour			
(a)	Low (up to 2)	30	25.00
(b)	Medium (3-4)	72	60.00
(c)	High (more than 4)	18	15.00
5. Cosmopoliteness			
(a)	Low (up to 2)	24	20.00
(b)	Medium (3-4)	85	70.83
(c)	High (more than 4)	11	9.17
6. Social participation			
(a)	Low (up to 3)	25	20.83
(b)	Medium (4-9)	79	65.83
7.	High (9-14)	16	13.34

It shows [Table 2] that vast majority i.e. 70.83 per cent of respondents had medium level of cosmopoliteness whereas 20 per cent of respondents had low level of cosmopoliteness. Nearly ten per cent of respondents were under highly cosmopolite category. The findings of the study are in line with Kafura *et. al.*, (2016) who reported that most of the farmers were under medium cosmopoliteness (65%). From above data, [Table 2] it is clear that 65.83 per cent respondents had medium social participation, followed by 20.83 per cent under low and only 13.34 per cent under high social participation. Mahalakshmi (2003) also reported that majority of respondents had medium level of social participation. The findings of the present study are in contrary with Bhanotra *et al.* (2016).

Relationship between Socio-Demographic Profile and Communication Characteristics of Farmers with the Extent of Use of ICTs

Its showed [Table 3] that education, total family income, mass media exposure, information seeking behavior, extension contact and cosmopoliteness had positive and significant relationship with the extent of use of ICTs whereas age, land holding and social participation were not significantly related to the extent of use of ICTs. Age of the respondents had negative significant relationship with the extent of use of ICT tools. It means that older people are much experienced about farming activity and need less information and they are also unwilling to use modern ICT tools. Level of education of the respondents had positive significant relationship with their extent of use of ICT tools. It indicates that the higher the level of education of the respondents, the more their extent of use of ICT tools. Educated people are more willing to use ICT tools compared to the illiterate people or people with low level of education. Kafura *et. al.* (2016). Total family income, innovativeness, and cosmopoliteness had positive significant relationship with extent of use of ICT tools by the farmers while age had negative significant relationship. Iorliam *et. al.* (2012) also confirmed that level of education, and incomes were the significant ($P<0.05$) determinants of ICT adoption. Warren *et. al.* (2000) also reported that education has positive and significant relationship with ICT use. Findings are in contrary with Chauhan (2010) who reported that extension contact is not significantly related to the internet use by the farmers.

Table 3: Association between Selected Characteristics of the Respondent Sand Extent of use of ICTs

Sl. No.	Variables	Extent of use of ICTs
		r
1.	Age	- 0.19
2.	Education	0.83**
3.	Total Family Income	0.25**
4.	Land holding	0.15
5.	Mass Media Exposure	0.36**

Table 3: Contd.,		
6.	Information seeking behaviour	0.47**
7.	Extension contact	0.81**
8.	Cosmopoliteness	0.39**
9.	Social participation	0.09

$t_{ab} = 2.636$ (1% level of significance)

**= Significance at 0.01 percent level of significance.

CONCLUSIONS

The study concluded that the socio-demographic profile and communication characteristics like age, land holding and social participation were not having any significant relationship with the extent of use of ICTs but level of education, total family income, mass media exposure, cosmopoliteness, information seeking behavior and extension contact had positive and significant relationship with the extent of use of ICTs for obtaining market information. This showed that the clear cut impact of socio-demographic profile with the extent of use of ICT. It seems that farmers due to high educational status, income, exposure and extension contact had acquired knowledge on various agricultural and other aspects.

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